ABSTRACT

SATELLITE-BASED POSITIONING RECEIVER WITH CORRECTION OF CROSS-CORRELATION ERRORS

The invention relates to a satellite-based positioning receiver receiving signals from different satellites, comprising a correlation channel Cii per satellite received, each correlator channel Cii having:

- a correlation path (12), in-phase and quadrature, between the signal received (Sr) and two respective local quadrature carriers (sine, cosine) generated by an oscillator with digital control of carrier (OPi) (NCO p);
- a code correlation path (16) based on the signals I, Q output by the carrier correlation path, with the local codes provided (C_{Pi}, Δ_i) by a digital generator of local codes (OCi) ;
- an integrator (20) for providing, for each local code, signals I_c Q_c at the output of the correlator channel Cii of the satellite received, c designating each of the local codes,

The receiver according to the invention comprises, for each correlator channel of the signal received from a satellite, as many additional correlator channels as additional satellites received, and the local punctual code of the satellite received is correlated with the local codes of the other additional satellites.

Applications: EGNOS (RIMS), WAAS, GALILEO Ground Stations

Figure: 2